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SEARCH REQUEST FORM

Requester's Full Name: LALITHA NAGUBANDI Examiner #: 82043 Date: 03/21/06
Art Unit: 1621 Phone Number: 2-7996 Serial Number: 10/539,785
Location (Bldg/Room#): REM/SD20 (Mailbox #): REM/C18 Results Format Preferred (circle) PAPER DISK

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following: M9

Title of Invention: Process for producing 1-Acetoxy-3-Substituted phenyl propene compound
Inventors (please provide full names): Masashi Shirai, Yoshihiro Yoshida, Shinichiro Sadaike

Earliest Priority Date: December 18th 2003

Search Topic:

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search for-

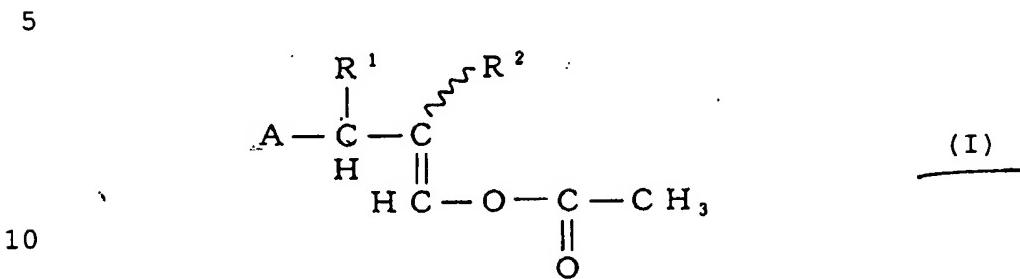
- ① a process producing 1-acetoxy-3(substituted phenyl) propene
Compound represented by str I in claim 1
- ② Compound search for str VI
- ③ Compound search for str X & XI
- ④ Pl. concentrate on claims 5-10; for process search

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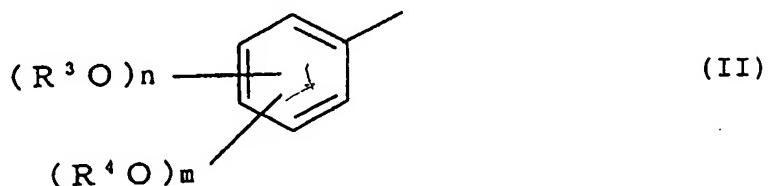
STAFF USE ONLY		Type of Search	Vendors and cost where applicable	
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Date Completed:		Litigation	Commercial Interference	Oligomer SPDI Score/Length Encode/Transl
Searcher Prep & Review Time:		Fulltext	Other (specify)	
Online Time:		Other		

CLAIMS

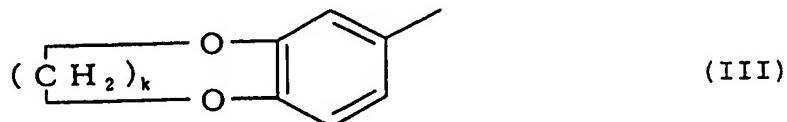
1. A process for producing a 1-acetoxy-3-(substituted phenyl)propene compound represented by the general formula (I):



in which formula (I), R¹ and R², respectively and
independently from each other, represent a member
selected from the groups consisting of a hydrogen atom
and alkyl groups having 1 to 10 carbon atoms, R¹ and R²
may form, together with carbon atoms located in the 2-
and 3-positions of the propene group, a cyclic group; and
A represents a member selected from a group of
substituted phenyl groups represented by the
formulae (II) and (III):



and



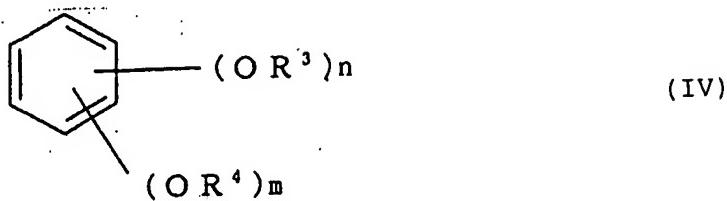
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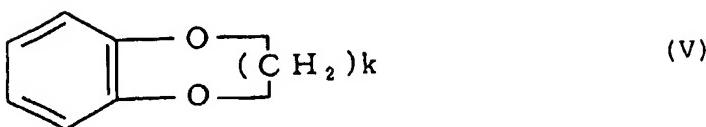
wherein R³ and R⁴, respectively and independently from each other, represent an alkyl group having 1 to 4 carbon atoms, m represents an integer of 0 or 1 to 4, n represents an integer of 1 or 5 and k represents an integer of 1 or 2,
comprising reacting a benzene compound selected from

those represented by the general formulae (IV) and (V):

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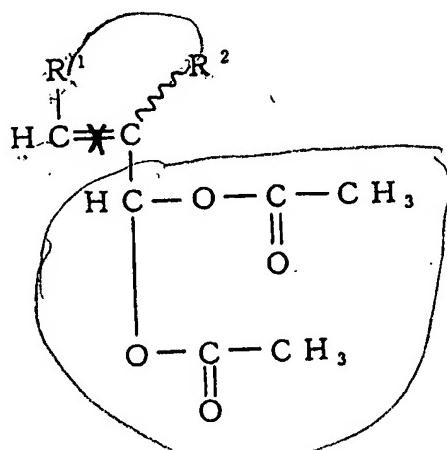


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in which formula (IV) and (V), R³ and R⁴ and n, m and k
are as defined above, with a 2-alkenylidene diacetate
compound represented by the general formula (VI):

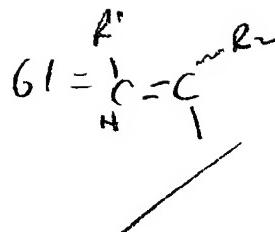
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G1

(VI)



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in which formula (VI), R¹ and R² are as defined above,
in the presence of a catalyst comprising at least
one compound selected from the group consisting of
(a) halogenated boron compounds, (b) triflate compounds
of Group 11 elements of the Periodic Table,
(c) halogenated compounds of Group 12 elements of the
Periodic Table, and (d) triflate compounds and
halogenated compounds of tin and lanthanoid elements of
atomic numbers 58 and 66 to 71.

Rep 62-(1-10)A

2. The process for producing a 1-acetoxy-3-

(substituted phenyl)propene compound as claimed in claim 1, wherein the benzene compounds represented by the formula (IV) is selected from the group consisting of anisole, veratrol, hydroquinone dimethylether, pyrogallol trimethylether and hydroxyhydroquinone trimethylether.

5 3. The process for producing a 1-acetoxy-3-(substituted phenyl)propene compound as claimed in claim 1, wherein the benzene compounds represented by the formula (V) is selected from the group consisting of 1,2-methylenedioxybenzene and 1,2-ethylenedioxybenzene.

10 4. The process for producing a 1-acetoxy-3-(substituted phenyl)propene compound as claimed in claim 1, wherein the alkenylidene diacetate is selected from the group consisting of 3,3-diacetoxy-2-methylpropene, 3,3-diacetoxy propene, 3,3-diacetoxy-1-methylpropene, 3,3-diacetoxy-2-ethyl propene, 3,3-diacetoxy-1-ethylpropene, and 3,3-diacetoxy-1-ethyl-2-methylpropene.

15 5. The process for producing a 1-acetoxy-3-(substituted phenyl)propene compound as claimed in claim 1, wherein the reaction is carried out in a molar ratio of the benzene compound to the alkenylidene diacetate compound of 1:1 to 50:1.

20 6. The process for producing a 1-acetoxy-3-(substituted phenyl)propene compound as claimed in claim 1, wherein the catalyst is present in an amount of 0.005 to 1 mole per mole of the alkenylidene diacetate compound.

25 7. The process for producing a 1-acetoxy-3-(substituted phenyl)propene compound as claimed in claim 1, wherein the halogenated boron compounds (a) usable for the catalyst are selected from boron fluorides, boron trifluoride-diethylether complexes, boron trifluoride-tetrahydrofuran complexes, boron trifluoride-acetic acid complex salt, boron trifluoride dihydrate, and boron trifluoride-n-buthylether complexes.

30 8. The process for producing a 1-acetoxy-3-

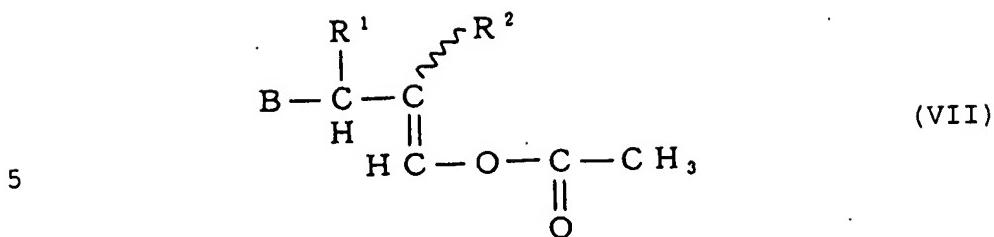
(substituted phenyl)propene compound as claimed in claim 1, wherein the triflate compounds (b) of Group 11 elements of the Periodic Table usable for the catalyst are selected from the group consisting of copper triflate and silver triflate.

5 9. The process for producing a 1-acetoxy-3-(substituted phenyl)propene compound as claimed in claim 1, wherein the halogenated compounds (c) of Group 12 elements usable for the catalyst are selected from the group consisting of zinc fluoride, zinc chloride, zinc bromide, zinc iodide, cadmium fluoride, cadmium chloride, cadmium bromide, cadmium iodide, hydrogen fluoride, mercury chloride, mercury bromide, and mercury iodide.

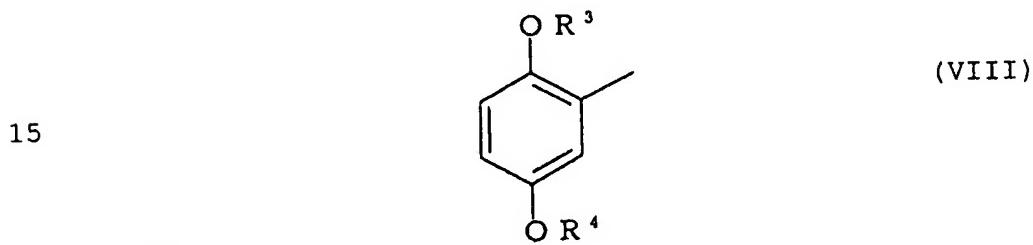
10 10. The process for producing a 1-acetoxy-3-(substituted phenyl)propene compound as claimed in claim 5, wherein the triflate and halogenated compounds (d) of tin and lanthanoid elements of atomic numbers 58 and 66 to 71 are selected from the group consisting of triflates, fluorides, chloride, bromides, and iodide of tin, cerium, dysprosium, holmium, erbium, thulium, ytterbium and lutetium.

15 11. The process for producing a 1-acetoxy-3-(substituted phenyl)propene compound as claimed in claim 1, wherein the reaction is carried out in an atmosphere consisting of a nonreactive gas to the above-mentioned compounds of the formulae (IV), (V) and (VI), the above-mentioned catalyst and the resultant reaction products.

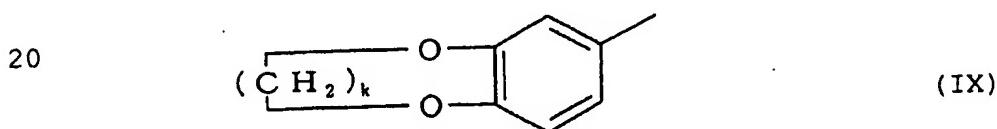
20 12. The process for producing a 1-acetoxy-3-(substituted phenyl)propene compound as claimed in claim 1, wherein the compounds of the formula (I) are selected from the compounds represented by the general formula (VII):



In which formula (VII), R¹, R² are as defined above, B
represents a member selected from a group of substituted
10 phenyl groups represented by the formulae (VIII) and
(IX):

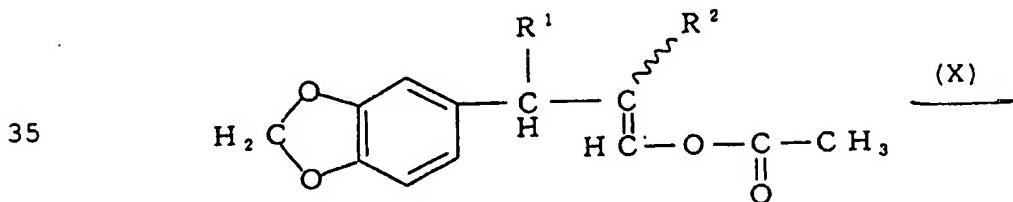


and



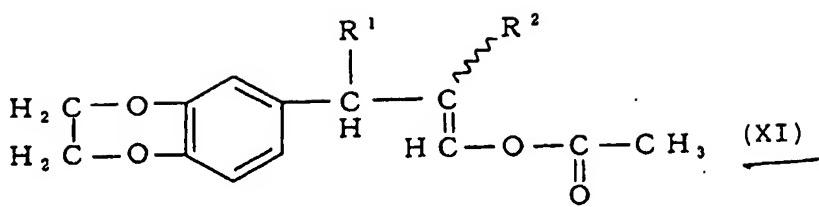
In which formulae (XIII) and (IX), R³ and R⁴ and k are as
25 defined above.

13. The process for producing a 1-acetoxy-3-(substituted phenyl)propene compound as claimed in
claim 1, wherein the compound of the formula (I) is
selected from 1-acetoxy-3-(3,4-C1 to C2 alkylene
30 dioxyphenyl)propenes represented by the formulae (X) and
(XI):



and

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14. The process for producing a 1-acetoxy-3-(substituted phenyl)propene compound as claimed in claim 12, wherein in the formulae (X) and (XI), R¹ represents a hydrogen atom and R² represents a methyl group.

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15. The process for producing a 1-acetoxy-3-(substituted phenyl)propene compound as claimed in claim 1, wherein the compound of the formula (I) is selected from the groups consisting of 1-acetoxy-2-methyl-3-(3,4-methylenedioxyphenyl)propene, 1-acetoxy-2-methyl-3-(3,4-ethylenedioxyphenyl)propene, 1-acetoxy-2-methyl-3-(4-methoxyphenyl)propene, 1-acetoxy-2-methyl-3-(2,5-dimethoxyphenyl)propene, and 1-acetoxy-2-methyl-3-(3,4-dimethoxyphenyl)propene.

FAST SEARCH

US 20050143599 A1 560/263	US-PPGPUB 20020627	Process for preparing monoesters Process for esterification in a chromatographic reactor	560/261
US 20020062039 A1 560/261	US-PPGPUB 20020523	Fluid bed vinyl acetate catalyst	560/261
US 20020028966 A1 560/234	US-PPGPUB 20020307	Process for the preparation of fluid bed vinyl acetate catalyst	560/261
US 20020022741 A1 560/234	US-PPGPUB 20020221	Metathesis syntheses of pheromones or their components	
US 20010056201 A1 525/328.9	US-PPGPUB 20011227	Process for the production of vinyl acetate	560/245
US 20010016666 A1 560/261	US-PPGPUB 20010823	Polymers of 3-butene esters, their preparation and use	
ALCOHOLS USING ACETIC ACID AS ACETYLATING AGENT AND CLAYS AS CATALYSTS US 6987200 B2 560/241	USPAT 20060117	PROCESS FOR THE PRODUCTION OF ESTERS FROM Alcohols using acetic acid as acetylating agent and clays as catalysts	560/231
particles on a porous support, in particular for the gas-phase oxidation of ethylene and acetic acid to give vinyl acetate 560/261		Process for producing catalysts comprising nanosize metal	
US 6982340 B2 US RE38864 E 560/241	USPAT 20051101	Process for producing an ester Process for making n-butyl esters from butadiene	554/142
US 6900347 B2 560/261	USPAT 20050531	Impurity inhibition in olefin metathesis reactions	
US 6825149 B2 yield for production of vinyl acetate US 6818792 B2 US 6803182 B1 emulsion grains with gallium complex composition, and gallium-doped silver halide emulsion US 6696596 B1 560/245	USPAT 20041130	Highly selective shell impregnated catalyst of improved space time Preparation of polymerizable compounds Gallium complex composition, process for doping silver halide Catalyst and method for producing vinyl acetate	560/218
US 6677495 B1 production and use thereof	USPAT 585/645	Oligomer mixtures derived from cyclopentene; method for the	

US 6605739 B1 ethylene oxidation	USPAT 560/245	20030812	10	Method for producing vinyl acetate monomer from ethane or
US 6602476 B2 422/146	USPAT	20030805	9	Apparatus and process for heat exchange with fluid beds
US 6540991 B2 US 6534434 B2	USPAT	20030401	5	Stabilized active materials
system	502/167	20030318	26	Chiral imidazolidinone-based catalyst composition and reaction
US 6506930 B1 US 6472555 B2	USPAT	20030114	7	Process for preparing alkyl (meth)acrylates
as acetylating and clays as catalysts	USPAT	20021029	9	Process for the production of esters from alcohols using acetic acid
US 6420595 B1 560/245	USPAT	560/231	36	Process control for vinyl acetate manufacture
US 6420308 B1 yield for production of vinyl acetate	USPAT	20020716	8	Highly selective shell impregnated catalyst of improved space time
US 6399813 B1 560/245	USPAT	502/344	14	Process for the preparation of fluid bed vinyl acetate catalyst
US 6395676 B2 502/330	USPAT	20020604	15	Process for the preparation of fluid bed vinyl acetate catalyst
US 6388042 B1 US 6376706 B2	USPAT	20020514	7	Dimethicone copolyol esters
560/241	USPAT	20020423	5	Catalyst and use thereof in the production of vinyl acetate
US 6348623 B1 560/261	USPAT	20020219	7	Polymers of 3-butene esters, their preparation and use
US 6348622 B1 560/260	USPAT	20020219	15	Vitamin a related compounds and process for producing the same
US 6322838 B1 US 6306943 B1	USPAT	20011127	10	Mint and/or fruit flavor compositions
US 6303537 B1 prepared utilizing sonication	USPAT	20011023	9	Zero volatile organic solvent compositions
US 6278031 B1 568/906	USPAT	20011016	6	Vinyl acetate catalyst comprising metallic palladium and gold and
		502/330		Catalyst and process for preparing 2-buten-1-ol compounds
		20010821		

US 6278016 B1 compounds	USPAT 560/261	20010821	Methods for conversion of isoprene to prenyl alcohol and related
US 6274531 B1 cupric acetate	USPAT 502/243	20010814	Vinyl acetate catalyst comprising metallic palladium and gold, and
US 6258978 B1 production of vinyl acetate	USPAT 560/248	20010710	Controlling product stream oxygen content in process for the
US 6252106 B1 560/261	USPAT 560/261	20010626	Method for stabilizing a sex pheromone compound
US 6228800 B1	USPAT	20010508	Noble metal support 502/339
US 6225496 B1 stream comprising acetic acid and water	USPAT 560/245	20010501	Process for the production of vinyl acetate utilizing a recycle
US 6215019 B1 560/234	USPAT	20010410	Synthesis of 5-decetyl acetate and other pheromone components
US 6191054 B1 device 438/780	USPAT	20010220	Method for forming film and method for fabricating semiconductor
US 6180821 B1 acid using a fluidized bed	USPAT 560/243	20010130	Integrated process for the production of vinyl acetate and/or acetic
US 6143921 A ethylene oxidation	USPAT 560/245	20001107	Method for producing vinyl acetate monomer from ethane or
US 6124270 A vaccine additive or drug	USPAT	20000926	Use of a cationic amphiphatic compound as a transfection agent,
US 6114573 A preparing vinyl acetate using the catalyst	USPAT	514/44	Catalyst, process for producing the catalyst and process for
US 6111130 A derivatives	USPAT 560/111	20000905 560/261	Process for the preparation of trifluoromethyl containing
US 6107515 A 560/261	USPAT	20000822	Process for preparing methacrylic or acrylic esters
US 6107514 A gold deposited on a copper containing carrier	USPAT	20000822 560/245	Vinyl acetate production using a catalyst comprising palladium and
US 6072079 A 560/261	USPAT	20000606 560/245	Continuous process for the production of diacetoxypentene

US 6048471 A 252/364	USPAT 20000411	Zero volatile organic compound compositions based upon organic solvents which are negligibly reactive with hydroxyl radical and do not contribute appreciably to the formation of ground based ozone
US 6040474 A acid 560/261	USPAT 20000321	Integrated process for the production of vinyl acetate and/or acetic acid
US 6034268 A 560/261	USPAT 20000307	8-Ocimethyl esters and fragrances and flavors containing the same
US 5891921 A preparation thereof US 5886214 A optical purity 560/261	USPAT 514/642 USPAT 19990406	Quaternary ammonium carboxylate and borate compositions and Process for the production of chiral unsaturated alcohols in high optical purity
US 5872277 A US 5859287 A palladium, gold, and any of certain third metals US 5821384 A 560/231	USPAT USPAT USPAT USPAT 19990216 19990112 19981013	Methods for preparing prenyl alcohol Process for preparing vinyl acetate utilizing a catalyst comprising palladium, gold, and any of certain third metals Process for generating vinyl carboxylate esters
US 5783726 A 560/261	USPAT 19980721	Process for the preparation of vinyl acetate catalyst
US 5744637 A 560/238	USPAT 19980428	Carboxylic acid accelerated formation of diesters
US 5731456 A US 5728376 A attractants for tomato pests US 5708167 A 540/485	USPAT USPAT USPAT USPAT 19980324 19980317 424/84 19980113	Preparation of vinyl acetate Tetradecatrienyl and tetradecadienyl acetates and their use as sex attractants for tomato pests Method for the preparation of an N-vinyl compound
US 5665667 A 502/300	USPAT 19970909	Process for the preparation of vinyl acetate catalyst
US 5607670 A US 5589548 A polyolefins 525/247	USPAT USPAT 19970304 19961231	Sex attractant for the cranberry fruitworm Process for preparing difunctional telechelic linear non-crosslinked polyolefins

US 5536693 A 502/300	USPAT	19960716	Process for the preparation of vinyl acetate catalyst
US 5502243 A	USPAT	19960326	Hydrocarbonylation of dimethyl ether
US 5466652 A 502/330	USPAT	19951114	Process for the preparation of vinyl acetate catalyst
US 5430179 A	USPAT	19950704	Homogeneous process for the ruthenium catalyzed addition of carboxylic acids to alkynes
US 5380901 A 556/440	USPAT	19950110	Multifunctional acrylates and the synthesis thereof
US 5296220 A	USPAT	19940322	Cockroach attractant
US 5294733 A	USPAT	19940315	Organic compositions and their manufacture
US 5280048 A	USPAT	19940118	.beta.,gamma.-dihydropolypropenyl alcohol derivatives and pharmaceutical composition containing a polypropenyl compound
US 5254714 A	USPAT	19931019	Hydrogenation of aromatic-substituted olefins using organoruthenium catalyst
US 5243099 A	USPAT	19930907	Synthesis of alpha-substituted alkadienes
US 5236715 A	USPAT	19930817	Sex attractant for the mint root borer
US 5231221 A	USPAT	19930727	Process for the preparation of acylals
US 5227517 A 560/238	USPAT	19930713	Process for preparing ethylidene diacetate using iodide catalysts
US 5202465 A 560/261	USPAT	19930413	Preparation of 2-methylenepropane-1,3-diol dicarboxylates
US 5196571 A	USPAT	19930323	Preparation of unsaturated monoesters
US 5169981 A	USPAT	19921208	6 Synthesis of alpha-substituted alkadienes
US 5169867 A	USPAT	19921208	8 Hydroxylamine compounds
US 5166379 A use 554/224	USPAT	19921124	10 Synthesis of compounds with biological activity, and methods of
US 5155253 A	USPAT	19921013	19 Transvinylation process for the preparation of thermally labile vinyl compounds and for vinyl compounds prepared from thermally labile acids
US 5149843 A	USPAT	19920922	16 Conjugated diene compounds
US 5118837 A	USPAT	19920602	10 Selective hydrogenation of olefins

US 5095134 A groups	560/24	USPAT	19920310	9	Thermochromic diacetylene ethers containing ester or urethane
US 5089659 A at the hydroxyl group	560/238	USPAT	19920218	4	Preparation of E7/Z9-alkadien-1-ols and their derivatives protected
US 5081083 A catalysts for improved impurity poisoning resistance, regeneration and increased activity	19920114	32	Method of treating intermetallic alloy hydrogenation/oxidation	502/50	
US 5077046 A production thereof	USPAT	19911231	28	Polypropenyl composition or compounds and process for the	
US 5073572 A 514/739	USPAT	546/290	19911217	7	Bioactive metabolites from cribrochalina vasculum
US 5072029 A 560/225	USPAT	19911210	5	Catalyzed process for reacting carboxylic acids with vinyl ethers	
US 5026903 A 560/232	USPAT	19910625	6	Production of ethylidene diacetate from dimethyl acetal	
US 4994087 A groups and hair dyeing preparations using them	USPAT	19910219	9	Compounds containing substituted phenylamino and pyridyl	
US 4992609 A same 585/509	USPAT	19910212	11	Phosphonium salts and processes for production of and uses for the	
US 4978778 A US 4970334 A 560/261	USPAT	19901218	12	Process for producing vinyl acetate	560/261
US 4965376 A function	USPAT	19901113	9	Process for preparing esters of unsaturated alcohols	
US 4943397 A US 4943396 A 560/201	USPAT	19901023	4	3,9-dihydroxyynone and its derivatives protected at the 9-OH	
US 4924026 A halogenated intermediates useful for preparing same	USPAT	19900508	6	Metathesis of functional olefins	560/201
US 4912253 A thereof	USPAT	19900327	5	Process for preparing linear alpha, omega difunctional molecules	
			31	Triisobutylene alcohols and esters, uses thereof in perfumery and	
			560/261		
			5	Method for the preparation of an unsaturated alcohol or ester	

US 4910321 A 549/213	USPAT	19900320	15	Living catalysts, complexes and polymers therefrom
US 4902824 A	USPAT	19900220	5	Dispersant for vinyl acetate unit fouling
US 4886904 A	USPAT	19891212		Polyisoprenyl composition or compounds and process for the
production thereof				
US 4843178 A 568/469.9	USPAT	19890627		Compositions possessing pheromone-like activity
US 4843170 A	USPAT	19890627		Process for producing vinyl acetate
US 4837358 A	USPAT	19890606		Preparation of 9-alkenyl ester compounds
US 4827004 A	USPAT	19890502		Isoprene derivatives
US 4818442 A	USPAT	19890404		Disproportionation process
US 4812509 A	USPAT	19890314		Esters and polyesters from cyclopentadienylethanol and bis(2-hydroxyethyl)dicyclopentadiene
US 4806679 A	USPAT	19890221		Isomerization of diacyloxybutenes
US 4801738 A	USPAT	19890131		Preparation of delta.-formylvalerates
US 4791222 A	USPAT	19881213		Process for preparing dihydromyrcenol and dihydromyrcenyl acetate
acetate	560/237			2-(trimethyl-trideceny)-tetramethylchroman intermediates for
US 4789750 A	USPAT	19881206		Process for the synthesis of esters and amides of carboxylic acids
vitamin E	549/407			Synthesis of E,Z-11-tetradecen-1-al
US 4780542 A	USPAT	19881025		Synthetic pheromone 8-methyl-2-decanol propanoate
	548/261			
US 4740627 A	USPAT	19880426		
US 4734524 A	USPAT	19880329		
560/265				
US 4691053 A	USPAT	19870901		Process for producing organic compounds by utilizing oxygenic
complexes	562/531			Preparation of terpenoid formates
US 4665221 A	USPAT	19870512		560/249
US 4658071 A	USPAT	19870414		Preparation of olefinically unsaturated compounds in particular
alkenols	568/903			
US 4658053 A	USPAT	19870414	3	Production of esters
				560/234

US 4650896 A 560/112	USPAT	19870317	5	Preparation of 2-alkyl-4,4-diacyloxybut-2-enals	
US 4629586 A 510/107	USPAT	19861216	23	Hexynyl alkanoates and organoleptic uses thereof	
US 4618704 A	USPAT	19861021	5	Acyloxy-2-butenes and their preparation	
US 4615838 A	USPAT	19861007	6	Unsaturated compounds and their preparation	
554/224					
US 4613457 A	USPAT	19860923	3	2-methyl pentanoic acid esters and perfume compositions	
containing them					
US 4599469 A	USPAT	19860708	8	Hydrogenation process	
US 4571408 A	USPAT	19860218	8	.alpha.,beta.-Dihydropolypropenyl derivatives for treating hepatitis	
514/546				570/193	
US 4560792 A	USPAT	19851224	10	Disproportionation of functional olefins	
US 4560776 A	USPAT	19851224	45	Prins reaction products of diisoamylene, derivatives thereof,	
organoleptic uses thereof and processes for preparing same				549/356	
US 4539209 A	USPAT	19850903	23	Food flavoring use of hexynyl alkanoates	
US 4536188 A	USPAT	19850820	3	Alcohol compositions having luminous flames	
US 4529132 A	USPAT	19850716	4	Process for preparing free-flowing ethylene homopolymers or	
copolymer waxes					
US 4525298 A	USPAT	19850625	20	Aliphatic alcohols and esters and their use as perfuming	
ingredients					
US 4521342 A	512/26	USPAT	19850604	4	Preparation of 2-alkyl-4,4-diacyloxybut-2-enals
554/163					
US 4520213 A	USPAT	19850528	6	Method for solvent recovery in solvent separation of ethanol from	
water					
US 4517377 A	USPAT	19850514	6	Process for producing vinyl acetate	
US 4510319 A	USPAT	19850409	12	Functionalization of terminal trisubstituted alkenes and derivatives	
thereof				560/261	
US 4501918 A	USPAT	19850226	36	Substituted methyl isopropyl oxocyclohexane derivatives,	
organoleptic uses thereof and process for preparing same				560/231	
US 4501687 A	USPAT	19850226	7	Cyclopentanols	
				512/8	

US 4499297 A 560/231	USPAT	19850212	4	Process for the preparation of alkylated cyclopentenones
US 4495359 A	USPAT	19850122	43	Prins reaction products of diisoamylene, derivatives thereof, 549/356
organoleptic uses thereof and processes for preparing same				Vinyl acetate purification process 560/248
US 4487959 A	USPAT	19841211	5	.alpha., beta.-Dihydropyrenyl derivatives useful in treating
US 4481217 A	USPAT	19841106	8	hepatitis
US 4469703 A same	USPAT	19840904	10	Nitroalkanol derivatives and plant protecting agents containing the
US 4465853 A US 4461910 A	USPAT	19840814		Method for isomerizing diacetoxypybutenes 560/262
560/263	USPAT	19840724		Process for the co-production of dicarboxylates and acids
US 4450289 A	USPAT	19840522		Butenyl acetate production 560/241
US 4450288 A	USPAT	19840522		Butenyl acetate production 560/241
US 4450287 A	USPAT	19840522		Butenyl acetate production 560/241
US 4450286 A	USPAT	19840522		Butenyl acetate production 560/241
US 4440961 A	USPAT	19840403		Branched chain olefinic alcohols, thiols, esters and ethers, Substituted esters and alcohols 568/840
organoleptic uses thereof, processes for preparing same and intermediates therefor				Extractive distillation of alcohol-ester mixtures and 568/840
US 4438286 A	USPAT	19840320		
US 4431838 A	USPAT	19840214		
transesterification				
US 4429151 A	USPAT	19840131		Prins reaction products of diisoamylene, derivatives thereof, 560/261
organoleptic uses thereof and processes for preparing same				Branched chain alkenyl methyl carbonates, uses thereof in augmenting or enhancing the aroma of perfume compositions, colognes and perfumed articles and formate intermediates useful in preparing same
US 4425265 A	USPAT	19840110		
augmenting or enhancing the aroma of perfume compositions, colognes and perfumed articles and formate intermediates useful in preparing same				
US 4415499 A	USPAT	19831115		Process for the manufacture of palladium(II) catalyst and for the manufacture of alkenyl esters of carboxylic acids employing said catalyst 554/153
US 4413639 A	USPAT	19831108		Use of prins and derivatives thereof in augmenting or enhancing the aroma or taste of a smoking tobacco composition or smoking tobacco article component 131/276

US 4410719 A 560/112	USPAT	19831018	Preparation of 2-alkyl-4,4-diacyloxybut-2-enals
US 4406810 A	USPAT	19830927	Process for forming esters (I) 560/103
enhancing the aroma of detergents		510/101	Use of Prins reaction products of diisobutylene in augmenting or
US 4399301 A	USPAT	19830816	Methylenically-substituted undecadienes 560/261
US 4395370 A	USPAT	19830726	Branched chain alkanyl methyl carbonates, uses thereof in augmenting or enhancing the aroma of perfume compositions, colognes and perfumed articles and formate intermediates useful in preparing same
US 4394285 A	USPAT	19830719	Prins reaction products of diisoamylene, derivatives thereof, 510/101
organoleptic uses thereof and processes for preparing same		426/534	Esters of 1,3-dimethyl-but-3-en-1-yl, their utilization as perfuming
US 4387047 A	USPAT	19830607	Organoleptic use of Prins reaction products of diisoamylene,
and flavoring ingredients and compositions containing same		510/101	Process for forming esters (II)
US 4381242 A	USPAT	19830426	Vinyl acetate purification process 560/248
derivatives thereof, organoleptic uses thereof and processes for preparing same		568/878	Branched chain olefinic alcohols, thiols, esters and ethers, Branched chain olefinic alcohols, thiols, esters and ethers, organoleptic uses thereof, processes for preparing same and intermediates therefor
US 4380636 A	USPAT	19830419	Process for the production of esters in the presence of a
US 4379940 A	USPAT	19830412	heterogeneous esterification catalyst 560/204
US 4375005 A	USPAT	19830222	Oxidation process using tellurium oxide catalysts 564/55
US 4374263 A	USPAT	19830215	Organoleptic use of Prins reaction products of diisoamylene
heterogeneous esterification catalyst		560/204	Process for separating organic liquid solutes from their solvent
US 4370497 A	USPAT	19830125	3,6-Dimethyl-3-hydroxy-oct-1-yne and -oct-1-enes, derivatives of
US 43359412 A	USPAT	19821116	these, and their use as scents, and in the preparation of 3,6-dimethyl-3-hydroxy-octane 568/840
derivatives		512/11	Isomerization of beta.-gamma.-unsaturated alcohol or its ester
US 4349415 A	USPAT	19820914	
mixtures		203/14	
US 4347388 A	USPAT	19820831	
these, and their use as scents, and in the preparation of 3,6-dimethyl-3-hydroxy-octane		568/840	
US 4338170 A	USPAT	19820706	
		204/157.87	

US 4331655 A	USPAT	19820525	Cosmetic compositions and processes containing ether and acyl 424/59
derivatives of 3,7,11-trimethyl-2,6,10-dodecatriene-1-ol	USPAT	19820302	Preparation of compounds containing two conjugated double bonds cis-cis and cis-trans
US 4317905 A	USPAT	549/415	Method of preparing monoesters
bonds cis-cis and cis-trans	USPAT	19820202	Manufacture of but-2-en-1-ol compounds by isomerizing the corresponding but-3-en-1-ol compounds
US 4314071 A	USPAT	19820112	Olefin disproportionation
US 4310709 A	USPAT	568/687	Intermediates for a sex pheromone for yellow scale
corresponding but-3-en-1-ol compounds	USPAT	19810526	Process for preparing polyethylene waxes
US 4269780 A	USPAT	19810512	Composite insect attractant for male cabbage moths and a process for preparing its active agents
US 4267363 A	USPAT	554/163	Catalytic process for the conversion of ethyl benzene to equimolar amounts of vinyl acetate and phenol
560/183	USPAT	19810407	Method for control of San Jose scale
US 4260548 A	USPAT	19810106	Polypropenyl derivatives
US 4243660 A	USPAT	19800930	Asymmetric synthesis
for preparing its active agents	USPAT	19800916	Intermediates for insect pheromone
US 4236024 A	USPAT	19800125	2-Methyl-2-ethyl-hexanoate ester perfume compositions
US 4225728 A	USPAT	560/261	Synthesis of esters of acetylenic alcohols
amounts of vinyl acetate and phenol	USPAT	19800311	Process for preparing cis-olefins
US 4223012 A	USPAT	19790710	Inclusion complex compound, process for its production, and method for its use
US 4192953 A	USPAT	560/22	Skin care with a cosmetic composition containing oleyl acetate
US 4160865 A	USPAT	19790612	Perfume compositions and process for preparing same
US 4158096 A	USPAT	19781121	Process for preparing esters
US 4126585 A	USPAT	512/26	560/90
512/26	USPAT	19781114	
US 4125735 A	USPAT	19781003	
US 4118406 A	USPAT	19780926	
US 4116955 A	USPAT	534/838	
method for its use	USPAT	19780815	
US 4107333 A	USPAT	514/785	
514/785	USPAT	19780801	
US 4104202 A	USPAT	512/25	
US 4068082 A	USPAT	19780110	
		5	

US 4066710 A	USPAT	19780103	4	Unsaturated alcohol	568/875
US 4061667 A	USPAT	19771206	3	Cis-2-methyl-oct-5-en-2-yl acetate	560/261
US 4059641 A	USPAT	19771122	20	Polypropenyl derivatives	568/857
US 4055603 A	USPAT	19771025	37	Alkynyl terminating groups in biogenetic-like cyclizations to steroids	
		549/13			